

## **REMARKS/ARGUMENTS**

The rejections presented in the Office Action dated August 10, 2010 (hereinafter “Office Action”), and the comments presented in the Advisory Action dated October 15, 2010 (hereinafter “Advisory Action”), have been considered. Reconsideration of the pending claims and allowance of the application in view of the present response is respectfully requested.

Since the Advisory Action indicates that the amendments to claims 49-51 were entered and the § 112(2) rejection was overcome, this rejection is not addressed further.

Applicant respectfully traverses the § 103(a) rejection of claims 54 and 63 based on the teachings of U.S. Patent 5,496,361 to Moberg *et al.* (hereinafter “Moberg”) as modified by the teachings of U.S. Patent 6,643,548 to Mai *et al.* (hereinafter “Mai”) because the asserted teachings alone, or in combination, do not teach or suggest each of the claimed features.

Contrary to the assertion at pages 5-6 of the Office Action, Mai does not teach or suggest opening a correlation window for each occurrence of a particular cardiac cycle feature fiducial point of the cardiac electrical signal and identifying a heart sound within each window, as claimed in claims 54 and 63. Rather, Mai merely discusses determining time spans between heart sounds and between heart sounds and a morphological feature of a cardiac cycle. Mai fails to contemplate opening a correlation window in the context of Applicant’s presently pending claims.

Moreover, Mai teaches that its time intervals are determined when the patient’s rhythm is stable, such as when the patient is at rest. See, e.g., column 2, lines 43-46. Further, Mai teaches use of its time intervals for evaluating the progression of a patient’s heart failure status, and is silent on cardiac tachyarrhythmia of the patient.

The proposed modification of Moberg to incorporate Mai’s technique of determining time intervals between a heart sound and a morphological feature of a cardiac cycle when the patient’s rhythm is stable teaches away from Applicant’s presently claimed features of using a correlation window to correlate heart sounds with cardiac cycle features to discriminate between normal cardiac function and cardiac tachyarrhythmia. One of

ordinary skill in the art would immediately appreciate that Mai's time interval determination technique which requires a stable cardiac rhythm would be inapplicable where elevated and unstable cardiac rhythms are to be discriminated. The United States Supreme Court affirmed in the *KSR Intern Co. v. Teleflex* decision addressing obviousness under §103(a) that a *prima facie* case of obviousness may be rebutted by showing that the art, in any material respect, teaches away from the claimed invention (127 S.Ct. 1727, 1740 (U.S. 2007) citing *United States v. Adams*, 383 U.S. 39, 40 (1966)).

Because Mai is solely relied upon as teaching these features of Applicant's claims 54 and 63 and fails to do so, and because Mai (alone or in combination with Moberg) teaches away from the claimed invention for reasons discussed hereinabove, the rejection of claims 54 and 63 is improper and withdrawal of the rejection is necessitated.

In an effort to facilitate prosecution, and without prejudice or disclaimer, the independent claims have been amended to include the features of dependent claims 54 and 63. Since the changes merely incorporate subject matter from dependent claims, the amendments do not introduce new matter. Dependent claim 53 has also been amended to provide consistency with the changes to claim 25; further support for those changes may be found at page 31, lines 9-15. Without correspondence to each of the claimed features, each of the prior art rejections would be improper. Applicant accordingly requests that each of the rejections be withdrawn.

To the extent the current response has not responded to any characterization in the Office Action of the asserted art or of the claimed subject matter, or to any application in the Office Action of the asserted art to any claimed subject matter, any such lack of response should not be interpreted as an acquiescence to such characterizations or applications. A detailed discussion of each of the Office Action's characterizations, or any other assertions or statements beyond that provided above is unnecessary in view of the present response. The right to address in detail any such assertions or statements in the future is reserved.

Authorization is given to charge Deposit Account No. 50-3581 (GUID.609PA) any necessary fees for this filing. If the Examiner believes it necessary or helpful, the Examiner is invited to contact the undersigned attorney to discuss any issues related to this case.

Respectfully submitted,

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